

19. THE ARTIFICIAL INCUBATION OF EGGS OF THE COMMON CAT SNAKE *BOIGA TRIGONATA* (SCHNEIDER)

The Indian Gamma or Cat Snake *Boiga trigonata* (Schneider) is very common in Gujarat State; local people know it as 'Mindadiya Sap' or 'Padaka'. A 87.5 cm long gravid female was captured on 9th July, 1986 from Harni area of Baroda city. Since limited information is available on the breeding habits of this species, it was kept for observation.

Background: The available literature gives the following information on the breeding habits of the Cat snake.

- (1) M. A. Smith (1943) — 3 to 11 eggs are laid, the young when born measure between 23.7 and 26.0 mm. in length.
- (2) R. Whitaker (1978) — A cat snake at the Madras Snake Park laid seven eggs in October and the length of the newborn young was 25.0 cm.
- (3) J. C. Daniel (1983) — Gravid females have been obtained from May to August and eggs in September. Three to 11 eggs are laid, measuring 30 × 10 mm. Hatchlings have been obtained in March and July.

Details of the breeding: The female Cat snake laid nine eggs in a wooden box at night on 18th July, 1986. The eggs formed a compact agglutinated mass, and were long, oval and white with little variation in size. The measurements are given in Table 1.

Incubation: The following method of artificial incubation was followed, which has proved successful with snake and lizard eggs.

The egg mass was removed from the wooden box and transferred to a transparent polythene bag with a substrate of moist cottonwool. The eggs were not directly put on moist cottonwool but on a piece of polythene bag. The

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TABLE 1

MEASUREMENTS OF THE FIVE FERTILE EGGS AND RESULTANT HATCHLINGS OF *Boiga trigonata* (IN CM.)

No.	Diameter of eggs	Length of eggs	Body length of young	Length of tail
1	1.3	3.2	25.5	5.0
2	1.1	3.1	25.5	5.3
3	1.2	3.3	25.7	5.1
4	1.0	2.9	25.0	4.9
5	1.1	3.0	25.0	4.8
Average	1.1	3.1	25.2	5.2

bag was inflated and closed tightly with a rubber band. It was then placed in a wooden box with ventilation at room temperature. The temperature varied from 18°C to 34°C. The eggs were inspected every day, and whenever any of them was dented, water was added to the cottonwool substrate. (Here the maintenance of correct humidity is vital). The polythene bag was inflated whenever necessary and the substrate was removed whenever it was noticed to be infected by fungi.

Hatching: Five eggs (55%) out of the total of nine proved to be infertile and some were lost due to fungal infection. The five fertile eggs hatched on the 3rd September after an incubation period of 48 days.

All the young were alert and very active. They exhibited identical body colour and pattern. Dorsal body colour was light brown with a series of 35 to 46 V-shaped zigzag markings. The top of the head had a clear "Y" mark in one snake but the head marks was totally different, having a dark streak from behind the eye. The Belly colour was tan with a small black spot on the outer margin of each ventral.

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20. ADDENDA TO THE AMPHIBIAN FAUNA OF INDIA

Recently Inger and Datta published [*J. Bombay nat. Hist. Soc.*, 83 (Supplement) Centenary issue (1886-1986)] "An overview of the amphibian fauna of India". We have noted that 13 valid species of Indian amphibians (Anura) have not been incorporated in the list. In order to make the list up to date, the names of the species including type localities and their known occurrence in the Indian States are given below.

Taxonomic list	Type locality	Records in Indian States
ANURA		
PELOBATIDAE		
1 <i>Megophrys kempii</i> (Annandale, 1912)	Upper Rotung Arunachal Pradesh	Arunachal Pradesh (Annandale, 1912)
BUFONIDAE:		
2 <i>Bufo sulphureus</i> Grandison & Daniel, 1964	Satara district, Maharashtra	Maharashtra (Grandison & Daniel, 1964)
RANIDAE:		
3 <i>Nyctibatrachus pygmaeus</i> (Gunther, 1875)	Anamalai Hills	Tamil Nadu (Gunther, 1875)
4 <i>Nannobatrachus annamallaiensis</i> Myers, 1942	Anamalai Hills	Tamil Nadu (Myers, 1942)
5 <i>Micrixalus herrei</i> Myers, 1942	Kallar	Kerala, (Myers, 1942)
6 <i>Rana bhagamandlensis</i> Rao, 1922	Coorg	Karnataka (Rao, 1922)
7 <i>Rana erythraea</i> (Schlegel, 1837)	Java	Assam (Boulenger, 1920), Orissa (Mohanti-Hejmadi, 1974), Meghalaya, Mizoram (Chanda, 1986) Assam (Boulenger, 1920)
8 <i>Rana kuhlii</i> Tschudi, 1838	Java	Assam (Boulenger, 1920)
9 <i>Rana nigrovittata</i> (Blyth, 1855)	Burma	Assam (Boulenger, 1920)
10 <i>Rana sinchalensis</i> Chanda, 1986	Darjeeling	West Bengal (Chanda, 1986)
RHACOPHORIDAE:		
11 <i>Philautus argus</i> (Annandale, 1912)	Arunachal Pradesh	Arunachal Pradesh (Annandale, 1912)
12 <i>Philautus longicrus</i> Rao, 1937	Kempholey	Karnataka (Rao, 1937)
13 <i>Philautus montanus</i> Rao, 1937	Kempholey	Karnataka (Rao, 1937)